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(54) Recording medium and reproducing apparatus thereof

In a PVD table of a management region on the (57)disc, a disc identifier 1 that represents the type of the data recording format of the disc, a number-of-discsides identifier 2 that represents whether the disc is a single-sided disc or a double-sided disc, and a disc side identifier 3 that represents whether the reproducing disc is side A or side B of a double-sided disc. A disc identifier 4 that represents the type of the data recording format of the file is recorded in a file (n) table including management information of the file. The reproducing apparatus reads the disc identifiers 1 and 4 from the PVD table and the file (n) table and determines whether or not the disc and the file are reproducible. In addition, the reproducing apparatus reads the number-of-disc-sides identifier 2 from the PVD table and determines whether or not the disc is a double-sided disc or a single-sided disc. When the disc is a double-sided disc, the reproducing apparatus determines whether the reproducing side is side A or side B.

FIG. 1

PHYSICAL SECTOR SIZE: 1024 BYTES LOGICAL SECTOR SIZE: 2038 BYTES LOGICAL BLOCK SIZE: 1024 BYTES

READ-IN MANA -GEMENT REGION DISC MANA -GEMENT SYSTEM AREA (NOT DEFINED) SEE PVD TABLE PVD SEE VTD TABLE VTD L TYPE PATH TABLE 36 L TYPE PT M TYPE PATH TABLE M TYPE PT DR ROUTE DR (00) ROUTE DR (01) FRE(1) FILE (1) **SECTORS** .FBLE (2) FILE (3) M Sectors FILE (2) DATA **₩**+n+n FILE (3) READ-OUT

DISC STRUCTURE

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EUROPEAN SEARCH REPORT

Application Number
EP 95 30 2502

ategory	Citation of document with it of selevant pa	edication, where appropriate,	Relevant to claim	CLASSIFICATION OF TH APPLICATION (Int.CL6)	
Α .	EP-A-0 570 203 (MAT INDUSTRIAL CO., LTD * column 3, line 28 * column 7, line 19 * column 9, line 19		G11B27/32 G11B27/10 G11B19/02 G11B19/12 G11B20/12 G11B27/34 G11B23/36		
),X),A.	EP-A-0 644 692 (K.K * the whole documen	.TOSHIBA) t *	1,15 2-6, 12-14, 16-20	G96F17/30 //H04N5/926	
	WO-A-95 12179 (TIME CO., L.P.) * the whole documen	WARNER ENTERTAINMENT	1,6,12, 14,15,20		
	EP-A-0 714 098 (K.K * the whole documen		1,15	TECHNICAL MEI DC	
•	EP-A-0 724 264 (K.K * the whole documen		1,15	SEARCHED (Int.CL.6)	
٠.	WO-A-96 16406 (PHIL AL.) * page 8, line 21 - claims 1-17 *	IPS ELECTRONICS N.V. E page 11, line 10;	T 1,6,10,	H04N G06F	
	EP-A-0 691 652 (SON	Y CORPORATION) - column 23, line 48	1,6,8,		
	EP-A-0 676 894 (SON * the whole documen	•	1,15		
	The present search report has b	-/			
	Place of search	Date of manufacture of the search		Examiner	
	THE HAGUE	Daalmans, F			
X:px Y:px	CATEGORY OF CITED DOCUME rticularly relevant if taken alone rticularly relevant if combined with an cussent of the same extensivy chaological background	E : earlier patent giter the filing other D : document cite L : document cite	ciple underlying the document, but put g date it in the application	e investion Sixhed on, or	



EUROPEAN SEARCH REPORT

Application Number EP 95 30 2502

ategory	Citation of document with indication, where appropriate, of relevant passages		Relevant to claim		ICATION OF THE TION (Int.CL6)	
Ę	EP-A-0 691 651 (SON' * column 4, line 51	CORPORATION) - column 29, line 23	1,6,8,			
A ·	WO-A-94 07332 (SONY * page 20, line 8 -	CORPORATION)	1-3,6, 15-20			
\	EP-A-0 521 487 (SON) * the whole document	·	1,3,6, 10-20			
	EP-A-0 459 157 (NEC	HOME ELECTRONICS, LTD.)	1-3,6, 15-20			
\	EP-A-0 325 325 (PHI OPTICAL COMPANY) * the whole documen		1-3,6, 15-20	•		
1	EP-A-0 542 377 (PHILIPS ELECTRONICS UK LIMITED)		1-3,6, 10,12,	TECHNICAL FIELDS SEARCHED (Int.Cl.6)		
	* the whole documen	t *	13,15-20			
					•	
	·	· · ·				
·		-		·		
-,	The present search report has be	rea drawn up for all claims	- i			
	Place of search	Date of completion of the sauch		Examiner		
	THE HAGUE	2 October 1996	Daa	lmans, F		
X : p2: Y : p2:	CATEGORY OF CITED BOCUMES rticularly relevant if taken alone rticularly relevant if combined with and cument of the same category hoological background	NTS I : theory or prince E : earlier patent of after the filing	iple inderlying the locument, but publicate in the application	igwestiss		

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